C.U.SHAH UNIVERSITY Summer Examination-2017

Subject Name: Biomolecular Engineering

Semester: 5 Date :22/03/2017 Time : 02:30 To 05:30 Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1 Attempt the following questions:-

- **a**) What is plasmid?
- **b**) Write full form of RDT.
- c) What is ssDNA?
- **d**) What is copy number of a plasmid?
- e) Write full form of pUC.
- f) True or False-"DNA has no net charge."
- g) Write full form of YAC.
- **h**) What is gene gun?
- i) What is electroporation?
- **j**) Write one commercially produced eukaryotic protein.
- **k**) True or False-

"A good vector should carry small DNA insert."

- I) What is pBR322?
- **m**) What is cDNA?
- **n**) What is primer?

Attempt any four questions from Q-2 to Q-8

Q-2Attempt all questionsaWhat is vector? Comment on its role in genetics.7bWhat do you mean by genetic engineering? Explain the role of genetic7engineering in health care sector.7

Q-3 Write short notes on-

a. b.	Genomic DNA libraries DNA ligation	7 7
Q-4	What is DNA library? Explain the construction and applications of cDNA	(14)
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(1x14=14)

libraries.

Q-5	a. b.	Write short notes on- Drug delivery system Screening of clones	7 7
0-6		Write short notes on-	
	a.	Properties of nanomaterials	7
	b.	Nanomedicine	7
Q-7		Attempt all questions	
	a.	Write the applications of genetic engineering.	7
	b.	Write role of gel electrophoresis in separation of DNA fragments.	7
Q-8		Attempt all questions	
-	a.	Explain the methods used for synthesis for nano structures.	7
	b.	What do you mean by Biosensor? Explain basic working process of biosensor.	7

